

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appl. No. 09/987,376

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claims 1-34 (canceled).

35. (currently amended): A filter assembly, comprising:
a block resonator filter comprising at least one tuning element for tuning at least one resonant frequency of said block resonator filter,
wherein the at least one tuning element comprises at least one void remaining when an area of material is removed from said block resonator and wherein further, a magnitude of the void completely determines a magnitude of a shift in the resonant frequency.

36. (currently amended): The filter assembly according to claim 35, wherein said at least one void tuning element comprises at least one slot within at least one face of said block resonator filter.

37. (currently amended): The filter assembly according to claim 35, wherein said at least one void tuning element comprises circular areas of conductive surface missing remaining when conductive material is removed from at least one face of said block resonator filter.

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38. (currently amended): The ~~method-filter assembly~~ according to claim 35, wherein said at least one ~~tuning element~~void ~~comprises a cylinder~~is cylindrical and is distributed among more than one orthogonal face of said block resonator filter.

39. (currently amended): The ~~method-filter assembly~~ according to claim 35, wherein said ~~tuning element~~void comprises grinded areas on a plurality of orthogonal faces of said block resonator filter, wherein ~~to change~~ the resonant frequencies of modes in said block are changed.

40. (currently amended): The filter assembly according to claim 36, further comprising:
a mask filter operably connected to said block resonator filter, wherein a passband of said ~~premask-mask~~ filter is wider than a passband of said block resonator filter; and
a low-pass filter operably connected to said block resonator filter, wherein said low-pass filter rejects frequencies greater than the passband of said block resonator filter.

41. (original): The filter assembly according to claim 36, wherein said slot is along a X-direction on a X-Z face of said block resonator filter.

42. (original): The filter assembly according to claim 36, wherein said at least one slot comprises:

- a slot along a X-direction on a X-Z face;
- a slot along a X-direction on a X-Y face; and

a slot along a Y-direction on a X-Y face.

43. (original): The filter assembly according to claim 36, wherein said at least one slot comprises a plurality of slots on orthogonal faces of said block resonator filter.

44. (original): The filter assembly according to claim 36, further comprising at least one corner cut.

45. (currently amended): The ~~method~~-filter assembly according to claim 36, further comprising a probe to radiate energy into and out of said block resonator filter.

46. (currently amended): The ~~method~~-filter assembly according to claim 36, further comprising:

a plated hole in said block resonator filter; and

a connection from said plated hole to an external circuit.

47. (original): The filter assembly according to claim 37, further comprising:

a mask filter operably connected to said block resonator filter, wherein a passband of said mask filter is wider than a passband of said block resonator filter; and

a low-pass filter operably connected to said block resonator filter, wherein said low-pass filter rejects frequencies greater than the passband of said block resonator filter.

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48. (currently amended): The ~~method~~-filter assembly according to claim 37, wherein said small circular areas comprises successive circles cut away from a X-Y face of said block resonator filter.

49. (currently amended): The ~~method~~-filter assembly according to claim 37, wherein said small circular areas comprises:

successive circles cut away from a X-Y face of said block resonator filter;

successive circles cut away from a X-Z face of said block resonator filter; and

successive circles cut away from a Y-Z face of said block resonator filter.

50. (currently amended): The ~~method~~-filter assembly according to claim 37, wherein said small circular areas comprise successive circles cut away from more than one orthogonal face of said block resonator filter.

51. (original): The filter assembly according to claim 37, further comprising at least one corner cut.

52. (currently amended): The ~~method~~-filter assembly according to claim 37, further comprising a probe to radiate energy into and out of said block resonator filter.

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53. (currently amended): The ~~method~~ filter assembly according to claim 37, further comprising:

- a plated hole in said block resonator filter; and
- a connection from said plated hole to an external circuit.

54. (currently amended): The filter assembly according to claim 38, further comprising:
a mask filter operably connected to said block resonator filter, wherein a passband of said ~~premask~~ mask filter is wider than a passband of said block resonator filter; and

a low-pass filter operably connected to said block resonator filter, wherein said lowpass filter rejects frequencies greater than the passband of said block resonator filter.

55. (original): The filter assembly according to claim 38, wherein said at least one tuning element is a metallic element.

56. (original): The filter assembly according to claim 38, wherein said at least one tuning element is a dielectric element.

57. (original): The filter assembly according to claim 38, further comprising at least one corner cut.

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58. (original): The filter assembly according to claim 38, further comprising a probe to radiate energy into and out of said block resonator filter.

59. (original): The filter assembly according to claim 38, further comprising:
a plated hole in said block resonator filter; and
a connection from said plated hole to an external circuit.

60. (original): The filter assembly according to claim 39, further comprising at least one corner cut.

61. (currently amended): The ~~method~~ filter assembly according to claim 39, further comprising a probe to radiate energy into and out of said block resonator filter.

62. (currently amended): The ~~method~~ filter assembly according to claim 39, further comprising:

a plated hole in said block resonator filter; and
a connection from said plated hole to an external circuit.

63. (new): A filter assembly according to claim 35, wherein a pattern of the removed area of material determines whether the frequency shift is positive or negative.